

BP 601 T

2025

B.Pharm. 6th Semester Final Examination

MEDICINAL CHEMISTRY — III (THEORY)

Girija Chowdhury Central Library
Girijananda Chowdhury University
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Full Marks – 75

Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following (Multiple Choice Questions) : 1 × 20
- (i) The term chemotherapy is used for (CO4)
- (a) Treatment of CVS disease
- (b) Treatment of CNS disease
- (c) Treatment of disease caused by infective organism
- (d) Treatment of respiratory disease
- (ii) Who is regarded as father of chemotherapy? (CO2)
- (a) Paul Ehrlich (b) Alexander Fleming
- (c) Gerhard Domagk (d) None of the above
- (iii) Which antibiotic is bacterial cell wall synthesis inhibitor? (CO2)
- (a) Cephalosporins (b) Macrolide antibiotics
- (c) Amino glycoside antibiotic (d) All of the above
- (iv) Which antibiotic is protein synthesis inhibitor? (CO3)
- (a) Penicillin (b) Cephalosporin
- (c) Erythromycin (d) Rifampin
- (v) Which of the following antibiotics is a macrolide? (CO2)
- (a) Chloramphenicol
- (b) Doxycycline
- (c) Erythromycin
- (d) Streptomycin

[Turn over

- (vi) Which of the following antibiotics is responsible for Gray Baby Syndrome? (CO3)
- (a) Chloramphenicol (b) Doxycycline
(c) Erythromycin (d) Streptomycin
- (vii) Penicillin was discovered by scientist (CO1)
- (a) Paul Ehrlich (b) Alexander Fleming
(c) Gerhard Domagk (d) None of the above
- (viii) Which is not a penicillinase resistant penicillin? (CO3)
- (a) Ampicillin (b) Amoxicillin
(c) Penicillin G (d) Penicillin V
- (ix) Tetracycline has how many rings? (CO3)
- (a) 1 (b) 2
(c) 3 (d) 4
- (x) The antimalarial drug belonging to pyrimidine derivatives is (CO4)
- (a) Mefloquine (b) Pyrimethamine
(c) Quinidine (d) Chloroquine
- (xi) Identification of a new chemical entity as a potential therapeutic agent (From Hit to Lead) is known as: (CO1)
- (a) Drug development (b) Drug discovery
(c) Both of the above (d) None of the above
- (xii) Process of bringing new pharmaceutical drug to the market once the lead compound has been identified through the process of drug discovery. From Lead to NDA is known as (CO1)
- (a) Drug development (b) Drug discovery
(c) Both of the above (d) None of the above
- (xiii) Cinchonism side effect is seen with which of the following antimalarial drugs (CO3)
- (a) Quinine (b) Chloroquine

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- (c) Primaquine (d) Mefloquine
- (xiv) For Tuberculosis, the drugs used to combat it are (CO2)
- (a) Streptomycin, Pyrazinamide (b) Isoniazid, Rifampicin
- (c) Both (a) and (b) (d) None of these
- (xv) Which of the following method is used for virtual screening? (CO1)
- (a) ADMET analysis (b) QSAR modelling
- (c) Pharmacophore modeling (d) All of the above
- (xvi) Sulpha methoxazole and trimethoprim combination is known as (CO2)
- (a) Cotrimazole (b) Cotrimoxazole
- (c) Cotrimethoxazole (d) None of the above
- (xvii) Which of the sulphonamide is used topically? (CO3)
- (a) Sulphadoxime (b) Dapsone
- (c) Silver sulphadiazine (d) Sulphamethoxazole
- (xviii) Which of the following is a benzimidazole derivative? (CO2)
- (a) Praziquantel (b) Mebendazole
- (c) Suramin (d) Pyrante
- (xix) Which of the following drugs inhibit herpes viruses? (CO2)
- (a) Amantadine (b) Acyclovir
- (c) Oseltamivir (d) Azidothymidine
- (xx) Which of the following approach is considered under the 'Ligand based drug designing'? (CO1)
- (a) Molecular docking (b) Pharmacophore modelling
- (c) QSAR Modelling (d) (b) and (c) both

2. Short answer. (Any seven) 7 × 5
- (a) Explain the synthesis of : Chloramphenicol and Ciprofloxacin. (CO2)
- (b) Discuss the SAR of quinolones. (CO4)
- (c) Classify the antifungal drugs with example. (CO2)

- (d) Describe the synthesis of : Metronidazole and Dapsone. (CO3)
- (e) Classify antifungal drugs with example. (CO1)
- (f) Describe in brief on the historical development of sulphonamides. (CO4)
- (g) Explain the concept and advantages of prodrug. (CO3)
- (h) Discuss the stereochemistry of penicillin. (CO4)
- (i) Classify antiviral agents and cite one example from each class with structure. (CO1)

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3. Long answer. (Answer any two) 2 × 10
- (a) Discuss the SAR and mechanism of action of beta lactam antibiotics. (CO2, CO4)
 - (b) Describe in brief about pharmacophore modeling, Docking and Combinatorial Chemistry. (CO1)
 - (c) Classify quinolines with example. Discuss the SAR of 8-amino quinolines. (CO3, CO4)
